

WHAT IS CLAIMED IS:

1. A field-emission display with improved electron emission, comprising:
an anode electrode layer, having at least one anode formed thereon;
a cathode electrode layer, having at least one cathode formed thereon, wherein
5 the cathode is aligned with the anode; and
a gate conductive layer disposed between the anode electrode layer and the
cathode electrode layer, the gate conductive layer having at least one aperture
aligned with the anode and the cathode;
wherein the cathode is so configured that beeline distances between all
10 surfaces points and the conductive layer are identical.
2. The display of Claim 1, wherein the anode electrode layer comprises a
substrate, and the anode comprises a first conductive layer and a second conductive
layer formed on the substrate sequentially.
3. The display of Claim 2, wherein the substrate is fabricated from glass
15 material.
4. The display of Claim 2, wherein the first conductive layer is fabricated
from ITO material.
5. The display of Claim 4, wherein the second conductive layer is
fabricated from phosphor powder.
- 20 6. The display of Claim 1, further comprising a dielectric layer formed and
patterned on the cathode electrode layer to encompass the cathode therein.
7. The display of Claim 6, wherein the gate conductive layer is formed on
the dielectric layer.
8. The display of Claim 1, wherein the cathode electrode layer comprises a
25 substrate, and a first conductive layer and a second conductive layer formed on the
substrate.

9. The display of Claim 8, wherein the first conductive layer is fabricated from silver paste.

10. The display of Claim 8, wherein the second conductive layer is fabricated from carbon nanotube.

5 11. A cathode electrode of a field-emission display, comprising:
a substrate; and
a cathode electrode formed on the substrate, wherein the cathode electrode has a center gradually descending towards a periphery thereof.

12. The electrode of Claim 11, wherein the cathode comprises a first
10 conductive layer and a second conductive layer.

13. The electrode of Claim 12, wherein the first conductive layer includes a patterned silver paste.

14. The electrode of Claim 12, wherein the second conductive layer includes a carbon nanotube.

15 15. A method of fabricating a field emission display, comprising:
forming at least one cathode electrode on a cathode substrate, wherein the cathode electrode has a protruding center gradually descending towards a periphery of the cathode electrode;

forming a dielectric layer on the cathode substrate, wherein the dielectric
20 layer is patterned to encompass the cathode electrode therein;

forming a gate conductive layer on the dielectric layer, wherein the gate conductive layer has an aperture aligned with the cathode electrode; and

forming at least one anode electrode on an anode substrate over the gate conductive layer, wherein the anode electrode is aligned with the cathode electrode.

25 16. The method of Claim 15, wherein the step of forming the cathode electrode further comprising:

applying a silver paste on the substrate;

providing a gray-scale mask over the silver paste;

exposing silver paste the silver paste with a light through the gray-scale mask, wherein the gray-scale mask has a gradually increasing transmission rate of the light from a center to a periphery thereof; and

5 removing the portion of the silver paste that has been exposed by the light.

17. The method of Claim 15, wherein the step of forming the anode electrode includes:

forming an indium tin oxide layer on the anode substrate; and

forming a phosphor layer on the indium tin oxide layer.

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